Newsletter of the North American Mycological Association

THE MYCOPHILE

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PRESIDENT'S REPORT, FALL 2017

by David Rust

You will see a summary in this issue about a new article "White paper on strategies to reduce risks and expand appreciation of foraged wild mushrooms" (see p. 14), by a group of researchers in British Columbia. This excellent study has many good recommendations for expanding communication and education to avoid mushroom poisonings in an era where foraging is increasingly popular, especially in the west where the death cap, *Amanita phalloides*, is spreading its range.

NAMA Board of Trustees Meeting

At our annual meeting, NAMA's Board of Trustees voted significant support over the next three years for the North American Mycoflora Project (link on p.3) matching fund set up by the Mycological Society of America. This partnership with the professional mycology community will jumpstart the project, which has been in need of funding since its inception in 2012. For the past three years, NAMA has been sampling specimens—at a cost of $1000 per year—collected at our annual forays. At the Northwoods foray in Cable, Wisconsin, Mycoflora Committee Chair Stephen Russell sat in the voucher area and methodically collected hundreds of tissue samples for DNA sequencing.

The Board voted to purchase Liability and Directors and Officers Insurance. This is a first for NAMA, and became necessary when venues where we book annual forays started to ask for it. Affiliated clubs have asked about NAMA getting an umbrella policy, but it turns out that because each state's requirements are different, this is not something insurance companies can offer us.

The most exciting exchange of the meeting centered around a report by the ad hoc "Futuring" committee. The Board discussed several new ideas about communication, marketing, promoting 'rock stars of the mushroom world', publishing a new membership brochure, developing inter-club communication, etc. These ideas will be built into tangible benefits for our members.

Susan Kayser, New Mycophile Editor

I'm pleased to welcome our new Editor of *The Mycophile* Susan Kayser. Susan has several roles with Illinois Mycological Association. She produces and sends out the monthly newsletter. She maintains membership records. Susan serves on the board as Secretary; she records the minutes for the board meetings, has charge of club records, and handles club correspondence.

Vacancies Filled

Charlotte Caplan is our new Education Committee Chair. Look for some new ideas and expansion of this program. Dianna Smith has taken on a new role as Chair of the Medicinal Mushrooms Committee. I'm sure she'll do a great job renewing this area of interest. Michael Beug has (temporarily) taken back the position of *McIlvainea* Editor to get some articles online and out to our membership).

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Upcoming Forays & Other Events

The events page of *The Mycophile* publicizes forays and events of NAMA affiliated clubs which may be of interest to our members. If you would like to list your club's next big event, contact
Susan Kayser, Editor: mycophile@namyco.org.
Include date, location, brief description, link for information, and host organization name.

Gulf States Mycological Society Winter Foray
December 1-3, 2017 | Camp Hardtner, Louisiana
The Gulf States Mycological Society will host their semi-annual foray at Camp Hardtner, Louisiana, December 1st through December 3rd, 2017. This year the Chief Mycologist will be Dr. Rod Tulloss, a world-renowned *Amanita* expert, with the Herbarium Rooseveltensis Amanitarum, Roosevelt, New Jersey. This foray's hosted student will be Stephanie Bulls from the University of South Alabama at Mobile. Come out and enjoy field trips to the Kisatchie National Forest, Kisatchie Unit, and to the Camp Hardtner property.
Registration: http://gsmyco.org/forays/winterforay2017.html

All California Club Foray 2018
Friday-Sunday, January 19-21, Albion, CA
The Bay Area Mycological Society is hosting our 8th biannual ACCF, near Mendocino, CA. Open to NAMA members! Cost is $200 per person and includes two nights lodging and all meals from Friday evening through Sunday breakfast. For more information and registration:
http://bayareamushrooms.org/forays/accf_2018.html

42nd Annual Sam Ristich NEMF Foray
26-29 July, 2018, at State University of NY at Geneseo.
http://www.nemf.org/index.html

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PRESIDENT'S REPORT, FALL 2017, CONT.

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North American Mycoflora Project

Look for a launch of the newly-configured North American Mycoflora Project (see p.5) toward the beginning of 2018. Stephen Russell and Bill Sheehan have issued a call for volunteers to assist in forming the new effort. We'll be calling for clubs to get involved, start their own local projects, learn new protocols, and provide encouragement to participate. Again, the purpose of MSA's dedicated Mycoflora fund is to provide matching funds to clubs for sequencing.

One idea I strongly support is establishment of projects through regional key councils, cooperative efforts by clubs in the same fungal range/habitat, using the model long established by the Pacific Northwest Key Council. This way, clubs can pool resources and identifiers toward the common goal.

Annual Foray

The area around Cable, Wisconsin turned out to be a terrific place to find mushrooms. Faculty who helped out with identification were treated to a broad array of diversity. I volunteered to take specimen photos in the voucher area, and ended up processing mushrooms on a neutral background for about 7 ½ hours: set up shot, adjust light, push sequence of buttons on camera, repeat. Yikes! I'm a photo-robot.—gives one new respect for the folks who do that task year after year. Over 550 species and counting! I look forward to seeing the full list with photos documented on mushroomobserver.org. Thanks to Britt Bunyard, Emily Stone, Patrick Leacock and Connie Durnan for organizing such a great event.

Elections

Besides all the thanks we owe to Connie Durnan for the big role she played organizing this year's annual foray in Cable, Connie has been elected 2nd Vice President. Connie's first assignment will be to organize a Nominating Committee for 2018, to find volunteers for the positions of President, 1st Vice President, and four Regional Trustees. Melodie Gates was elected to a three year term as Treasurer.

Membership Renewal

You will soon receive an email notice about renewing your NAMA membership. In the coming year, you'll continue to receive our excellent newsletter, *The Mycophile*, have an opportunity to attend a regional or national foray (next year: Salem, Oregon!), and be a part of the community of mycophiles. Your membership supports our scientific outreach, scholarship, educational programs, website, and poison case registry.

President's Award

Normally, the President's Award for Outstanding Achievement is given to someone who has contributed in an extraordinary way in the past year. However, this year's award goes to Ursula Pohl, in recognition of her many years of diligence and preparation of edible mushrooms, dating back to 1987 at the annual foray in Gulfport, Mississippi. Thank you, Ursula, for 30 years of mycophagy!

Ursula is third from the left, in pink.

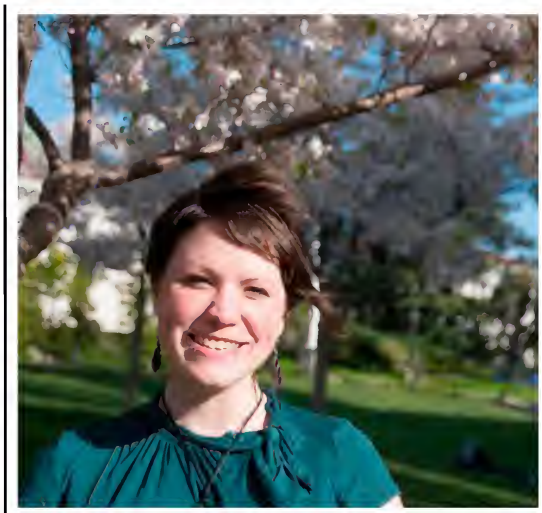
Link to N.A. Mycoflora Project:
https://www.namyco.org/docs/MycophileSeptOct2016.pdf

2017 NAMA Memorial Fellowship

The 2017 NAMA Memorial Fellowship recipient is Catherine Adams, a PhD student at UC Berkeley in Dr. Tom Bruns' lab, studying the invasive ectomycorrhizal fungus, *Amanita phalloides*. The death cap mushroom kills more people than any other mushroom, but how the deadly amatoxins influence its invasion remains unexplored.

Previously, Cat earned her MA with Anne Pringle at Harvard University. Her thesis examined fungal pathogens of the wild Bolivian chili pepper, *Capsicum chacoense*, and how the fungi evolved tolerance to spice. With the Joint Genome Institute, she is sequencing the genome of one fungal isolate, a *Phomopsis* species, to better understand the novel enzymes these fungi wield to outwit their plant host. You can read more about her at http://plantandmicrobiology.berkeley.edu/search/gss/profile%20Catherine%20Adams.

She is native to Los Angeles, California, but was dispersed as a child to Seattle, Washington. There, Cat developed a penchant for precipitation, puns, and poisons.



Cat eagerly awaits applying her NAMA award to travel to Europe this fall to study the death cap in its native range in Portugal. There, she will sample mushrooms, sample the soil that houses the mushrooms, and sample the local port wine, which is rumored to be delicious.

McIlvainea: Journal of American Amateur Mycology

by Michael W . Beug

I have returned to the role of editor of *McIlvainea*, NAMA's journal for rapid publication of research by NAMA members and other members of the North American mycological community. All papers are reviewed by at least one author and as soon as approved by the reviewer(s) and by the *McIlvainea* editor are posted on the NAMA website. Unlike most journals, we have no page charges. We will endeavor to make it possible for people inexperienced with scientific publication to get their mycological research published, for young scientists to get their first publication, and for professional mycologists to publish research of broad mycological interest. If you are wondering whether or not a project you are engaged in is worthy of publication, ask me!

As new articles are published in *McIlvainea*, NAMA members will be notified via *The Mycophile*. For shorter articles, we will reprint the entire article in *The Mycophile*. For longer articles, we will publish the paper title, authors, and an abstract of the paper so that readers are alerted to go to the NAMA website to read the entire paper. I will also (slowly) begin to scan and post old paper copies of *McIlvainea* so that they are available to all.

With this issue of *The Mycophile,* I announce one new paper now available in *McIlvainea* online (see p. 14).

cont. on p. 16

Status Update on the North American Mycoflora Project
by Bill Sheehan and Stephen Russell

The North American Mycoflora Project is finally starting to take off, five years after an initial meeting at Yale University in 2012. What's new is that citizens scientists are being mobilized—starting with NAMA-affiliated mushroom clubs—to be the boots on the ground collecting, vouchering and sequencing thousands of specimens in every corner of North America. The last year has seen significant advancements on multiple fronts. Here's an update on some of the most important components.

Our goal is to make it easy and inexpensive for citizen scientists to do high quality science by documenting, vouchering and sequencing specimens. Two of the most persistent needs of NAMA clubs have been the means to store dried specimens in curated fungaria and a way to access DNA sequencing at a reasonable cost. Both of these problems have been addressed. The Botanical Research Institute of Texas (BRIT) has agreed to be the fungarium-of-last-resort for members of this project who do not have a relationship with a local fungarium. We have also established a service for member projects to get their specimens genetically sequenced at a competitive rate. For a cost as low as $10 per specimen, the tissue from your collections can be sequenced at one of two collaborating academic labs: Duke University and University of Wisconsin-La Crosse. This cost includes DNA extraction, amplification, sequencing, and uploading your sequences to GenBank.

Funding for projects has also been an impediment historically, and this is another area where the needle has been moved. A full day workshop was held in July at the Mycological Society of America's annual meeting in Athens, Georgia. This workshop was designed to foster collaboration between the professional and citizen scientist communities. The professional community was fully supportive of these efforts. After the workshop the MSA Board committed $20,000 in matching funds over two years to the project. In September, the NAMA Board authorized $11,000 over three years for sequencing specimens from NAMA forays and from NAMA-affiliated clubs. Both of these monies will form the core of a Mycoflora Fund to which mushroom clubs and individuals can apply for grants to support local DNA sequencing initiatives.

So what do you need to do to participate in the North American Mycoflora Project? Go to www.mycoflora.org/newproject and fill out the registration form that asks about your plans for a local mycoflora project. Only registered mycoflora projects will be able to access our sequencing and vouchering facilities, as well as to apply to the Mycoflora Fund for sequencing grants. Clubs that want to get a head start can begin photographing and drying specimens, following protocols posted at www.mycoflora.org/protocols.

We plan to begin accepting specimens for self-funded sequencing projects sometime in November 2017. It will take a few months longer before we are ready to accept grant applications to access the Mycoflora Fund. A formal project launch to raise awareness among the broader mushroom-loving public is planned to occur around the start of the new year. Finally, this project is being built to last for the long-term. We have initiated the process of starting a 501(c)(3) nonprofit so the Mycoflora Project can accept tax-exempt funds.

We're excited about the potential for the North American Mycoflora Project to engage lots of volunteer mushroom enthusiasts in a scientific enterprise that will ultimately contribute to understanding the roles fungi in ecosystem health. Please join our Facebook Page (www.facebook.com/mycoflora/) and Email List (www.mycoflora.org/email-list) to stay abreast of new details of this project.

Photograhy Contest Awards

Limited Documentary Category Winners

1st Place: *Amanita polypyramis*
Geoff Blame

2nd Place; *Leptonia cyanea*
Drew Henderson

3rd Place: *Cortinarius armillatus*
Kathy Yerich

Honorable Mention: *Boletus bicolor*
Thomas Roehl

Honorable Mention: *Climacodon septentrionale*
Howard Goltz

Limited Judges Option Category Winners

1st Place: Impossible Split
Kathy Yerich

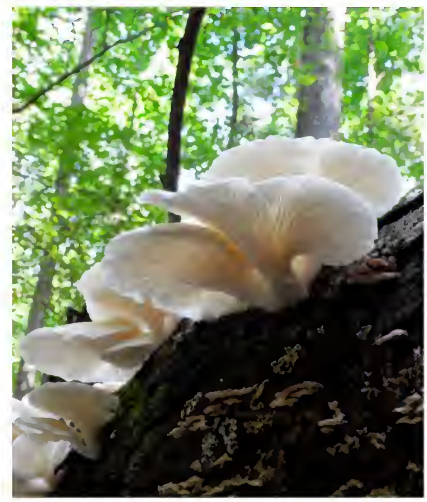
2nd Place: Good as Gold!
Joe Brandt

3rd Place: Dancing in my Dreams
Howard Goltz

Limited Pictorial Category Winners

1st Place: *Spectacular Stereum*
Joe Brandt

2nd Place: *Ramaria cyaneigranosa*
Drew Henderson



3rd Place: *Pleurotus palmonarius*
Geoff Blame

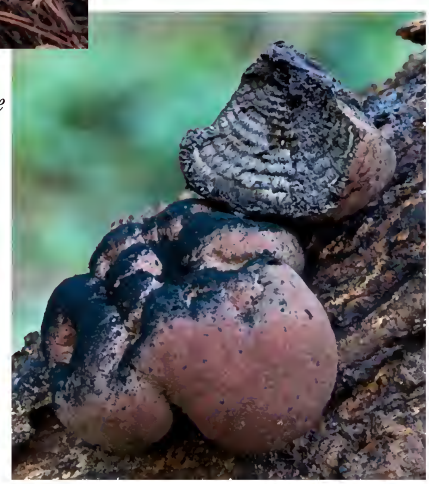
Honorable Mention: *Coprinus quadrifidus*
Howard Goltz

Honorable Mention: *Craterellus tubaeformis*
Kathy Yerich

Honorable Mention: *Hericium coralloides*
Lindsay Appel

Open Documentary Category Winners

1st Place: *Suillus pungens*
Robert Gergulics
The 3 Foragers



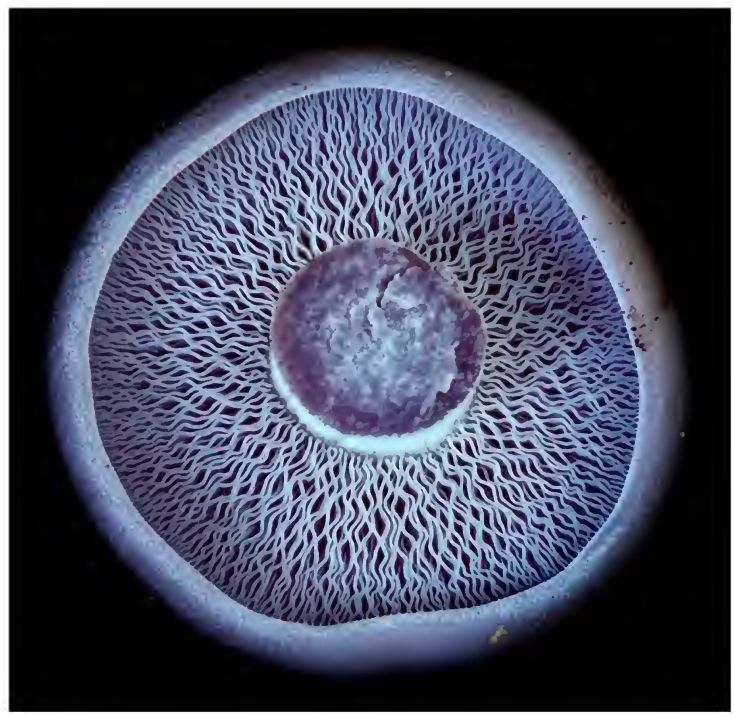
2nd Place: *Daldinia childiae*
Mark Bower

3rd Place: *Boletus carminipes*
Robert Gergulics
The 3 Foragers

Honorable Mention: *Boletus huronensis*
Robert Gergulics
The 3 Foragers

Open Judges Option Category Winners

1st Place: My Goodness!!
Calvatia cyathiformis
Mark Bower



2nd Place: *Clitocybe nuda*
Mark Bower

Open Pictorial Category Winners

1st Place: *Microporus affinis*
Robert Gergulics
The 3 Foragers

2nd Place: *Schizophyllum commune*
Mark Bower

3rd Place: *Hypoxylon howeanum*
Robert Gergulics
The 3 Foragers

Honorable Mention: *Sarcoscypha occidentalis*
Robert Gergulics
The 3 Foragers

Honorable Mention: *Tubifera ferruginosa*
Mark Bowers

Lincoff Award: Nomination for John Plischke III

John is a relentless photographer. At many forays he is often remembered for being outside taking photos instead of attending programs! He has a vast highly organized collection of photos he has taken nationally and internationally. He is also remembered for being inside at the display room studying and working to help identify the mushrooms during evening programs and often well into the night. As a photographer and identifier, he often brings specimens home to work on. John takes special pride in his quest to identify species he finds. He uses his microscopes to aid in identification. He researches the literature. He has a vast collection of books in his personal library. He also possesses a huge treasure trove of digital books, research articles, magazine articles and others. He consults with experts in Canada, Germany, Italy, England, and France in efforts to identify an unknown species. Samples are also sent to the Western Pennsylvania Mushroom Club and other organizations for DNA testing. Not only does John seek help to identify his finds, others seek him out for assistance in identifying their finds.

Over the years John has written mushroom articles or had articles written in many newspapers, including the Tribune Review, Latrobe Bulletin, Blairsville Dispatch, Kittanning Leader Times, and the Pittsburgh Post-Gazette. He also wrote many articles for NAMA's and the WPMC newsletters. He has written for *Fungi Magazine*.

He is author of 4 books: *Morel Mushrooms and their Poisonous Look-Alikes* and *Good Mushroom, Bad Mushroom*, which helped amateur mycologists all over the country. The third book, *Mushrooms that Grow on Other Mushrooms, A Trial Key in Progress Listing Over 380 Forms*, is available digitally for free on the Internet at: http://goodmushroom.weebly.com/ Using *Chemicals and Stains for Fungi* is also available for free at http://goodmushroom.weebly.com/

He won over 90 national and regional awards for his mushroom photography. John Plischke III has contributed to more than a dozen mycology books, including photographs and suggestions, as well as two computer programs, including *Matchmaker*.

He has served as First Vice President of NAMA. He has served for 12 years as NAMA's Photography Chair. He created several slide programs for NAMA. He was presented the NAMA Knighton Award. He was the Chairman of the 2011 Clarion NAMA Foray which made much money for NAMA and the WPMC. He was instrumental in obtaining Ellis Becker's mushroom collection for amateur mycology, which included books, slides, and a herbarium. Ellis was a friend of Harry Knighton. Other NAMA activities include the Photography Chair and membership in committees.

John created the famous Christmas Card Program that went out to all the NAMA Clubs. They featured mushrooms on the digital cards that were sent via email, which helped develop mushrooming all over the country.

John Plischke III founded the Western PA Mushroom Club 16 years ago. Within 5 years it had grown to over 500 members, making it one of the largest mushroom clubs in the US. It now has 648 members. For many of those years he has been the Membership Chair, Walk & Foray Chair and Club Mycologist. There is no doubt he brought mushrooming to Western Pennsylvania.

John has given many programs and walks to NAMA affiliated clubs, and helped them grow. He has been guest mycologist at many clubs' forays. He has worked with NEMF and received the Northeast Mycological Federation 2016 Distinguished Service Award.

As the Fungal Chair of the PA Biological Survey, he was instrumental in getting the PA state parks, state forests and

Photo on p. 19
cont. on p. 23

Knighton Award: Nomination for Chris May

I am writing to nominate Chris May of the Arizona Mushroom Society for NAMA's Harry and Elsie Knighton Service Award for Contributions to Amateur Mycology. Chris has taken the lead of the Arizona Mushroom Club, re-organized it as a fully functioning 501(c)(3) organization with a board of directors and committees, and has himself participated on a number of these committees, resulting in a broad variety of events and activities for families throughout the region. Chris's untiring work ethic has also led to a greater focus on the identification and scientific knowledge of mushrooms throughout Arizona, including the funds to support the testing of morel species found throughout the state in 2016 (which was featured in the March/April 2016 NAMA newsletter).

Chris's work with the Arizona Mushroom Society organization has resulted in a substantial spike in interest and huge increase in members and the involvement by those members in educational activities, forays, specimen collection for scientific inquiry, annual and educational meetings, and culinary events and activities. In 2016, the Arizona Mushroom Society led 4 morel forays throughout the state (2 led or co-led by Chris), and 3 other summer forays (1 led by Chris). Of the latter, Chris organized and led the Katey Johnson Memorial Porcini Foray, which resulted in funds donated to the family of Katey Johnson, who was an enthusiastic member of the AMS. Chris has also both led educational seminars about mushrooms himself and organized a number of others for mushroom society members to learn more about various mycological subjects from mushroom identification to small scale mushroom production. In addition, educational lectures and talks have been coordinated with annual meetings to provide more opportunities for members to learn about general mycological principles as well as the unique mycological diversity of Arizona.

Chris has also contributed vastly to the identification and scientific study of Arizona's mushrooms, which is an important contribution to the national and international state of knowledge regarding mycological diversity. Chris's leadership in organizing and operating the annual Arizona Mushroom Society foray in 2016 led to the identification of over 150 species of fungi by amateur and professional mycologists, including a number of species that had previously not been officially recorded in the state. In addition Chris played an important role in supporting the collection and funding the DNA analysis of morels found throughout the state, which has led to new information provided by Terri Clements on a number of new species of the *Mochellaea* family that were previously unknown from the area.

In summary, Chris's efforts have provided a platform for people to learn about and experience the excitement and mystery of Arizona fungi. In addition to the specific efforts identified above, he has facilitated connections amongst those interested in mushrooms to enhance our learning and our ability to strive and obtain greater knowledge and understanding of our local fungi. He has provided a comprehensive website (http://arizonamushroomsociety.org) to provide up-to-date information on events, updates, committees, etc. He has also personally reached out, repeatedly, to both the new and curious and professionals alike to improve the diversity and involvement of people involved in both the organization and the joint effort to learn and love this special part of our world.

I hope you will consider Dr. Chris May for consideration for NAMA's Harry and Elsie Knighton Service Award for Contributions to Amateur Mycology.

Photo on p. 19

WHITE PAPER ON STRATEGIES TO REDUCE RISKS AND EXPAND APPRECIATION OF FORAGED WILD MUSHROOMS

Authors: Anna Bazzicalupo; Shannon Berch; Brenda Callan; Oluna Ceska; Paul Kroeger; Raymond Li; Lorraine McIntyre; Vivian Miao; Richard Stanwick; Steve Trudell; Else C. Vellinga; Jonathan D. Walton; Willoughby Arevalo; Amanda Asay; Ben Auxier; Adolf Ceska; Jaclyn Dee; Sharmin Gamiet; Brandon Landry; Ludovic Le Renard; Cameron Schwarz; Laura Super; Bernie van der Meer; and Mary Berbee. 2017.

Abstracted from McIlvainea Volume 26

Abstract

Poisonings by mushrooms in the Pacific Northwest (USA) and BC (Canada) will likely increase because of rising interest in foraging for wild food. Among these, serious poisonings may also increase because the non-native death cap mushroom *Amanita phalloides* is spreading in our cities, parks and orchards. To draft recommendations to address these problems, mycologists, medical professionals and research staff met at the University of British Columbia on May 27 and 28 2017. In this paper, we outline goals for the development and dissemination of information on edible and poisonous mushrooms for healthcare professionals and the general public. To improve on the miniscule 5% of mushrooms identified following calls to poison centers, clear procedures for front-line workers should be developed and implemented so that samples of ingested and potentially poisonous mushrooms are routinely and rapidly conveyed to expert mycological identifiers. Through collaboration with mushroom clubs, we recommend expanding training in identification. In consultation with regional governments, voluntary certification programs to help consumers recognize high quality in retailed foraged mushrooms should be developed. We offer a list of regional mushroom species generally regarded as edible for harvesting and consumption. We acknowledge that our recommendations range from readily feasible to difficult but the time has come for an explicit wish list. The recent death of a toddler in BC and serious illness in 14 people in California from eating death cap mushrooms lends new urgency to developing strategies to reduce risks from poisonous species.

Recommendations to reduce risks of poisoning:

• Strengthen communication among healthcare providers, poison control centers and expert mushroom identifiers to improve the likelihood of correct identification of suspect fungi that had been eaten. Develop and promulgate standardized procedures for collecting specimens, conveying them to identifiers, and recording and curating the final identifications.

• Publicize data from mushroom exposure records to raise awareness among healthcare providers and veterinarians about the circumstances and the range of symptoms related to mushroom poisoning.

• Research on toxins is still needed for dangerous but understudied taxa like *Gyromitra* and *Amanita smithiana.* It remains unclear whether mushroom toxin levels are species or strain specific, or variable depending on environment.

• *Amanita phalloides* is an emerging threat to human health. Find ways to minimize harm from this and other poisonous species. Poisoning from wild mushrooms is as much an emerging issue in cities as in forests and we have an opportunity to reduce risk of serious harm to casual toddler and pet grazers as well as to adult foragers.

• Expand public education initiatives, bearing in mind the need to reach diverse communities in our multicultural societies.

cont. on p. 15

WHITE PAPER ON STRATEGIES TO REDUCE RISK, CONT.

cont. from p. 14

Fig. 1. Identification of these poisonous west coast mushrooms can help save the life of someone who ate one. A) death cap, *Amanita phalloides* Mushroom Observer 211761 UBC F32774, B) deadly parasol *Lepiota subincarnata* UBC F29841, C) *Galerina marginata*, D) *Cortinarius rubellus*, E) Smith's amanita *Amanita smithiana* PK7613, F) false morel or brain mushroom, *Gyromitra esculenta* Mushroom Observer 195828 UBC F31398. Photos A, B, F by A. Ceska; E by L. Le Renard; C, D by M. Beug.

Read the entire article at: http://www.namyco.org/docs/EdiblePoisonousReport20170914.pdf

Wildacres 2017–A 20th Year Celebration

by Glenda O'Neal (Wildacres Foray Registrar)

Located just off the Blue Ridge Parkway, near Little Switzerland, North Carolina, Wildacres Retreat Center has been the home for our regional foray for the last 20 years. Those who have been there know that words will not do the experience justice. Allein Stanley, who has attended all 20 forays, describes it as her favorite. There are many, many repeat attenders; however each year, we welcome new friends into our fold, and this year was no exception. To experience Wildacres, is to experience family. It is truly a reunion each year.

Though we were initially concerned, because the remnants of Irma came through the region a couple of weeks before our foray was scheduled to begin, closing portions of the Parkway and nearby trails, and placing the attendance of a few of or foray registrants in question, we actually ended up with a very dry event, with no significant rain for more than a week prior to our arrival. Nevertheless, we were able to catalog at least 175 species, with many specimens growing on dead wood. Dr. Brandon Matheny, from the University of Tennessee-Knoxville, served as our chief mycologist, and spoke at our Saturday evening program on several topics, including fungi in the forest following wildfires. As some of you know, our Great Smoky Mountains suffered severe damage from wildfires in late November 2016. The forests continue to heal. We were also very thankful to have Dr. Owen McConnell, who gave a wonderful talk on Friday night featuring the Boletes of North Carolina, and Dr. Rod Tulloss, who stayed on, following his *Amanita* intensive workshop which took place in the days leading up to the Wildacres foray. Gabrielle Zieger, who has attended 19 of the Wildarces events, gave a talk summarizing the fungal finds of the last 19 years. I am sure that more information on that topic will be forthcoming.

In honor or Allein Stanley, Jack Greene composed a song which was performed at the Saturday evening celebration. Steve Roberts, Jay Justice, and Becky Rader, rounded out the band. By the way, southern girls and ladies do not say "no", for that word is much too harsh. They simply say, "That does not suit me at this time."

Some may have a different opinion, but I think the star mushroom find for the weekend was *Neoalbatrellus caeruleoporus*. Each year, following our first year, about 10% of our cataloged collections are new to the foray, having never been found at Wildacres before. This year was no exception. This mushroom came to the table in two separate collections. *N. caeruleoporus*, related to the Russulales, has a beautiful grey-blue cap and pore surface, and grows in the summer-fall in low wet woods in association with hemlocks. Truly beautiful.

Old friends, new friends, fungi, song, music, champagne, cake: our 2017 Wildacres foray was a grand success. We are looking forward to the next 20 years. (Photos on next page.)

McIlvainea, cont.

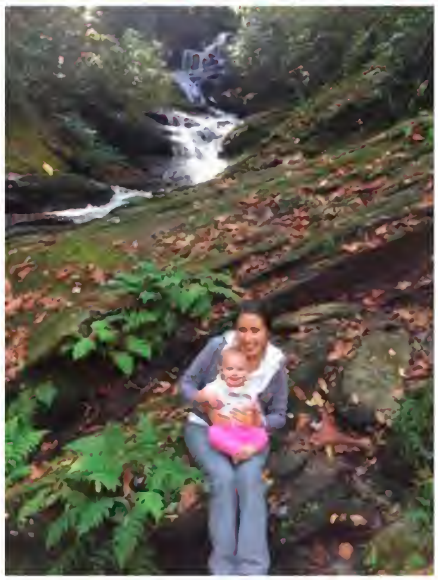
cont. from p, 4

Anna Bazzicalupo; Shannon Berch; Brenda Callan; Oluna Ceska; Paul Kroeger; Raymond Li; Lorraine McIntyre; Vivian Miao; Richard Stanwick; Steve Trudell; Else C. Vellinga; Jonathan D. Walton; Willoughby Arevalo; Amanda Asay; Ben Auxier; Adolf Ceska; Jaclyn Dee; Sharmin Gamiet; Brandon Landry; Ludovic Le Renard; Cameron Schwarz; Laura Super; Bernie van der Meer; and Mary Berbee. 2017. *White paper on strategies to reduce risks and expand appreciation of foraged wild mushrooms. McIlvainea Vol. 26.*

WILDACRES 2017, CONT.

Allein looks on as the band sings her tribute song

Two Wildacres newcomers—Bill Sheehan and Linas Kudzma, and a long-timer, Larry Siegel



Ellen Crocker and little Sophia

Neoalbatrellus caeruleoporus
Photo by Rob Simpson

Group photo by Rob Simpson

NAMA South of the Border

by Diane Pruden

Early in 2017, President David Rust was seeking someone who spoke Spanish to work at establishing some mycological contacts in Mexico. I already had a trip scheduled for July to collect mushrooms in Mexico. As luck would have it, we learned of an exciting meeting near the area where I would be traveling. This was an ideal event at which to meet Mexican mycologists and to tell them about NAMA. We hoped to learn of organizations like NAMA, but nothing along that line was identified. We will continue to reach out to contacts.

The meeting "Mushrooms, humans and nature in a changing world" was the 9th International Workshop on Edible Mycorrhizal Mushrooms, taking place in Texcoco, Mexico. Texcoco is about a forty-five minute to one-hour drive southeast of Mexico City. It is a colonial city hosting two universities but is not a suburb or barrio of Mexico City. As described in the meeting materials, "IWEMM is the major international convention that brings together experts on diversity, ecophysiology, biotechnology, traditional knowledge, molecular biology, genomic sciences and cultivations of truffles and other edible ectomycorrhizal fungi since 1998." One hundred twenty-seven research works were presented by authors from more than twenty countries and five continents. All the presentations were in English.

Many of the presentations focused on cultivation of truffles, *Boletus edulis*, *Tricholoma matsutake* and others. The culturally oriented presentations relating to Mexico were especially interesting. There was an exhibit of ancient codices from Mexico in which mushrooms are depicted. A field trip to oak, pine and fir forests ended at a compound under development by an indigenous group. They hope to build cabins and other infrastructure for mycotourism. A visit to the ancient city of Teotihuacan was also offered. On the final day, a large fair was held. Many people had collected and brought various edible mushrooms to sell, several different

Market Display

mushrooms were being cooked and sold and some vendors offered various handicrafts and books. All the vend-ors were dressed in traditional costumes. Tables of fresh edible

Hand-embroidered dress from Chiapas

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Photos of the 2017 Award Winners

John Plischke III
Winner of the Lincoff Award

Chris May
Winner of the Knighton Award

Mexico Trip, cont.

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mushroom displays used much of the space. The mushrooms were displayed in or on a variety of hand-crafted materials from many parts of Mexico. The labels had the scientific name followed by Mexican common names and English common names.

In the week following the meeting, I visited friends who live around the Monarch Butterfly sanctuaries which are to the west and southwest of Mexico City. We collected in several different habitats with local people. Visiting several local markets was a good way to see many edible mushrooms which we did not find in the woods. Wild mushrooms are a major economic source for many in Mexico. They begin collecting at dawn, arrive in the markets by nine or ten in the morning, sell out by around three and then head back up the mountains to do more collecting until dark. Families of my friends were happy to prepare several different species for dinner.

AN UPDATE ON THE HEBELOMA PROJECT
CITIZEN SCIENCE AT WORK

by Henry Beker(1), Ursula Eberhardt(2), Nicole Schütz(2)and Linda Davies(3)

In the September-October 2016 issue of THE MYCOPHILE we appealed for help from NAMA members and Citizen Scientists with regard to our *Hebeloma* project in North America. We have had a huge amount of help … but we still need more. First, a quick update on our progress. In June we assembled a project report as part of the presentation that we gave at the Northwoods Foray in September. The statistics were as follows: nearly 7000 *Hebeloma* collections on our database, of which 944 were from North America. This represented 700 from the USA and 244 from Canada with most of the remainder from Europe. Figure 1 shows the distribution of these North American collections.

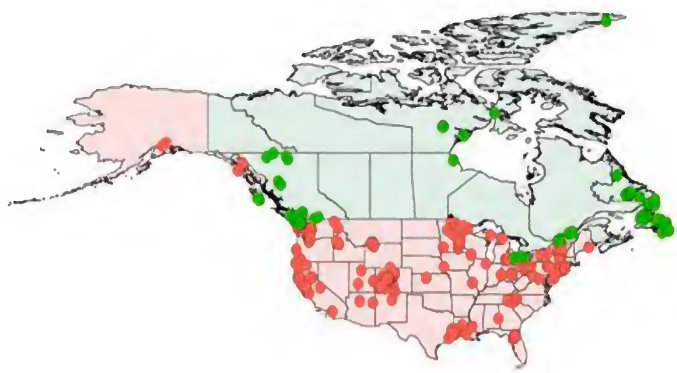

Figure 1 Distribution of North American collections up to June 17. The map was compiled with QGIS v.2.2.0 'Valmeria' using shapefiles from www.gadm.org.

Figure 2 shows the breakdown of the collections we have studied. Of note are the roughly 10% of collections that have come from a number of Citizen Scientists, often through Mushroom Observer. We are also fortunate to have had a number of clubs collecting for us. With regard to types, we need to examine 216 type collections. So far we have had access to 129 of them, so we are making good progress. The section labelled 'HJB' represents those collections made by us and 'Other' a variety of other herbarium collections we have examined. Apart from the obvious 'patchiness' of our collections, of note is that we had no collections from Mexico and very few from the center of the continent and north of the continent. Nevertheless, our analysis so far already indicates 64 different species, of which only 26 are known from Europe. This means that 38 of these species are not known from Europe. Of these 38, so far we can apply names (although not necessarily the oldest name) to 18, but 20 remain without names. It would be premature to give new names to any of these taxa until we have studied all the types, as who knows what we may yet discover as we go through this type material.

The good news is that the 64 species we have so far uncovered within North America, all appear to belong to the same 13 sections that were defined in the European monograph (Beker, Eberhardt & Vesterholt, *Fungi Europaei Volume 14*: Hebeloma *(Fr.) P. Kumm.*, Edizioni Tecnografica, 2016). So the keys to sections are as valid for North America as they are for Europe. In Figure 3 we present the names, so far, within their sections. But note that many are currently only given sectional names. We must also emphasize that this is 'work in progress'; as we

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HEBELOMA PROJECT UPDATE, CONT.

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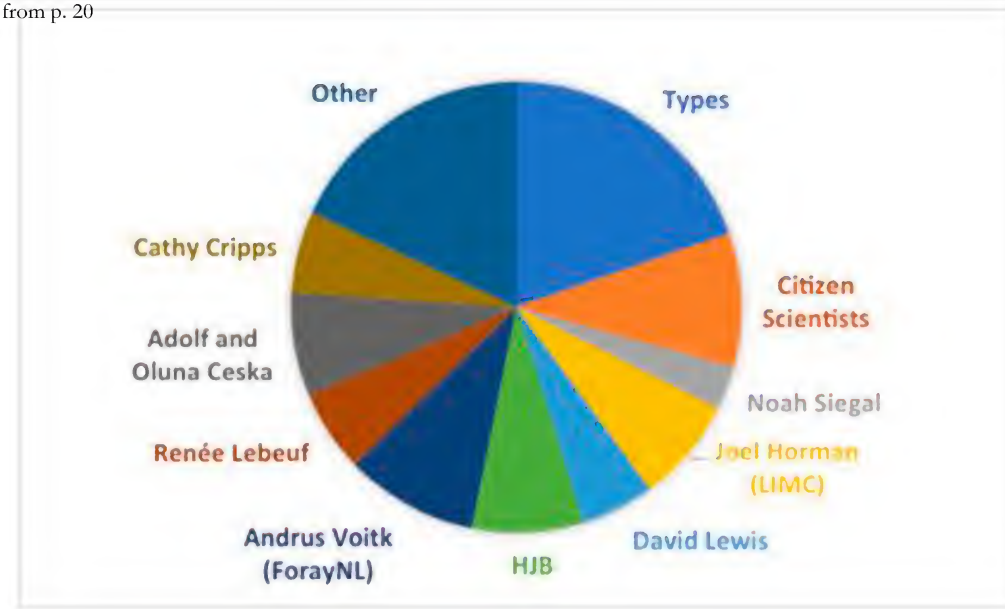

Figure 2 Contributors to North American collections

continue our studies (examining types, further loci within the DNA, further morphological studies) this list will most likely change.

So, a further plea for help. We need more collections. And we also need collections from across the continent and ideally collections from every kind of habitat. *Hebeloma* spp. are ectomycorrhizal and, as we discovered in Europe, most species associate with only a single family of trees or shrubs. And this may include (dwarf) shrubs of families like *Cistaceae* or *Rosaceae* or *Salicaceae* (e.g. arctic/alpine willows).

During this last summer we made an effort to start filling in some of the gaps within our collections. We visited Mexico and made contact with a number of mycologists there, who are now becoming involved with our project. We were also intrigued to discover that some *Hebeloma* in Mexico are regarded as prized 'edibles'! We are yet to sort out which species these are, so at present we would still recommend against eating Hebeloma. We also visited a small part of the Canadian arctic (Somerset and Devon Islands), where we made a number of *Hebeloma* collections. Indeed, our North American trip this summer has yielded some 300 *Hebeloma* collections that we are still to analyze.

When we first started visiting North America to study *Hebeloma* in 2014, many people did tell us that *Hebeloma* were pretty rare in North America. And indeed, when we looked at foray reports on-line they did seem to be rarely recorded. However, our experience collecting them in North America has not supported this perception. Provided the timing is right, they appear to be relatively common. As an example, following the NAMA foray in Wisconsin we spent three days in the area. We made 30 collections. Indeed, on our last morning in Wisconsin, we were in Bayfield and went for a morning stroll. We passed the front lawn of a church, with a Tilia tree. Among the numerous ectomycorrhizal fungi on that lawn were no fewer than six different *Hebeloma* species.

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HEBELOMA PROJECT UPDATE, CONT.

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sect. Hebeloma	sect. Denudata	sect. Naviculospora	sect. Velutipes
clavulipes		angustisporium	brunneifolium
colvini	**sect. Crustuliniformia**	avallaneum	caulocystidiosum
dunense	aanenii	naviculosporum	incarnatulum
excedens	alpinum	sp1. sect. Naviculospora	leucosarx
fuscatum	aurantioumbrinum	sp2. sect. Naviculospora	subconcolor
harperi	crustuliniforme	sp3. sect. Naviculospora	velutipes
hygrophilum	bellotianum	sp4. sect. Naviculospora	sp1. sect. Velutipes
marginatulum	geminatum		
mesophaeum	minus	**sect. Scabrispora**	**sect. Sinapizantia**
nigellum	sporadicum	amarellum	mackinawense
oreophilum		politum	megacarpum
pascuense	**sect. Clepsydroida**	sp1. sect. Scabrispora	
sp1. sect. Hebeloma	arenosum	sp2. sect. Scabrispora	**sect. Sacchariolentia**
sp2. sect. Hebeloma	barrowsii	sp3. sect. Scabrispora	aggregatum
sp3. sect. Hebeloma	cavipes	sp4. sect. Scabrispora	ischnostylum
sp4. sect. Hebeloma	limbatum		sacchariolens
	ingratum	**sect. Theobromina**	sp1. sect. Sacchariolentia
	vaccinum	sp1. sect. Theobromina	
	sp1. sect. Clepsydroida	sp2. sect. Theobromina	**sect. Porphyrospora**
		sp3. sect. Theobromina	sarcophyllum
	sect. Hiemalia		sp1. sect. Porphyrospora
	hiemale		
	sp1. sect. Hiemalia		

Figure 3 The 64 species so far recorded within North America. The names in red are species that we have recorded only, until now, in North America.

So:

Please photograph and collect specimens. In the September-October, 2016 issue of *The Mycophile* we printed a copy of the recording sheet. But you can also download it from the NAMA website or request a pdf from us. Even if you cannot fill in everything on the recording sheet, provided you have a good photograph and have noted any odor and the habitat, we can normally do the rest. The material then needs to be dried (ideally at about 110 deg F–approx. 45 deg C). Once the material is dry we can arrange a FedEx pickup of the material from you. Joel Horman will organize this; all collections go to him first and periodically he puts together a parcel for us. This means it should be hassle-free and cost-free for you or your club to send us the material.

Of course, if you would like to try and identify the material yourself, we would be happy to support you and check your determination. We are happy to provide pdfs of the keys on request. Fortunately, the keys to sections should work fine in North America; the keys to species within sections may be more challenging! In our experience, with a little practice most reasonably competent mycologists can at least determine the section without too much effort.

Once we receive the material, it will enter a pipeline within which we will carry out a molecular and morphological analysis. We will try to generate an ITS sequence from every collection we are sent and if it looks interesting (i.e. not one of the more common species) we will then generate several sequences from different loci. Again, if you have access to the capability to

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HEBELOMA PROJECT UPDATE, CONT.

cont. from p. 22
generate your own sequence, then we would be happy to BLAST it against our many thousands of sequences.

And, we will feedback the results, letting you know the species (whether or not we can apply a name) or whether it is a taxon we do not recognize, possibly new to science (not such a rare event). From our database we can build distribution maps for species and we are working towards making this available on a website; eventually we also hope to give access to our database through the internet, allowing collections to be viewed and status to be monitored. In due course and where appropriate we will also cooperate with Mycoflora 2.0.

For clubs, if you are interested in contributing to this project, we would be delighted to visit and help you get started. If your club can provide the laboratory equipment, we can run workshops, giving participants the chance for hands-on use of the keys. We can also provide presentations to meetings.

It's going to take a few more years but we are working towards a North American monograph on *Hebeloma*. Please contribute and be a part of this project.

Please feel free to contact us at any of the two following email addresses: Henry Beker (henry@hjbeker.com) & Ursula Eberhardt (ursula.eberhardt@smns-bw.de).

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LINCOFF AWARD NOMINATION, CONT.

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state game lands, millions of acres, open to hunting of wild mushrooms, making mushrooms accessible all over the state. Before John was Fungal Chair, mushrooming was closed on state controlled land in PA. He was influential in creating the PA state mushroom poster and patches, creating a mushroom video which is shown all over the state, and a children's book. He presented wild mushroom programs all over the state and to the entire Portage School District and to students at Garrett College in Maryland. John has introduced the joy and fascination of wild mushrooms to tens of thousands of people.

He was a WPMC Distinguished Service Award Winner. He obtained Tom Volk's Mushroom Display Signs which were used at the 2011 NAMA Foray in Clarion and at numerous forays of the WPMC. He developed the Mushroom Button Program with the help of Gary & Irene Lincoff. The goal of the Button Program is to get members to learn new mushrooms and to get more Club Identifiers and Club Mycologists. Members are recognized for obtaining their goals by receiving a button with the number of mushrooms they have demonstrated they can identify. He also compiled 2 mushroom cookbooks which helped make the WPMC financially solvent.

John Plischke III is eminently qualified to be the recipient of the Gary Lincoff (NAMA) Award for Contributions to Amateur Mycology. Thank you for your consideration.

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Newsletter of the North American Mycological Association
THE MYCOPHILE

Mushrooms with Sour Cream Sauce

This dish was served by Cathy Lambrecht at the NAMA Foray.

Ingredients: (Serves 8-12)

6 tablespoons butter
2 pounds mushrooms
Milk
½ teaspoon freshly ground pepper
½ cup minced onion
1 cup sour cream
1 teaspoon salt or to taste
¼ teaspoon Worcestershire sauce
Optional: Dried or fresh dill; start with a little and add more to taste.
Optional: ½ cup grated Parmesan cheese

Directions:

Place mushrooms in a bowl and wash quickly but thoroughly under running water, swishing them around with your hands. Drain mushrooms in a colander, then slice roughly 1/3 inch thick.

In a large (10- to 12-inch) frying pan over medium heat, melt butter. Add minced onion and sprinkle with a little salt. Once the onions are translucent, add the mushrooms, increasing the temperature to medium-high. Mushrooms will release a lot of liquid. Continue to cook until the mushrooms are moist and nearly dry of excess liquid. This will concentrate the mushroom flavor. Stir in the sour cream, then thin with milk to desired consistency. Add in Worcestershire sauce, salt and pepper to taste. Serve.